

1/33

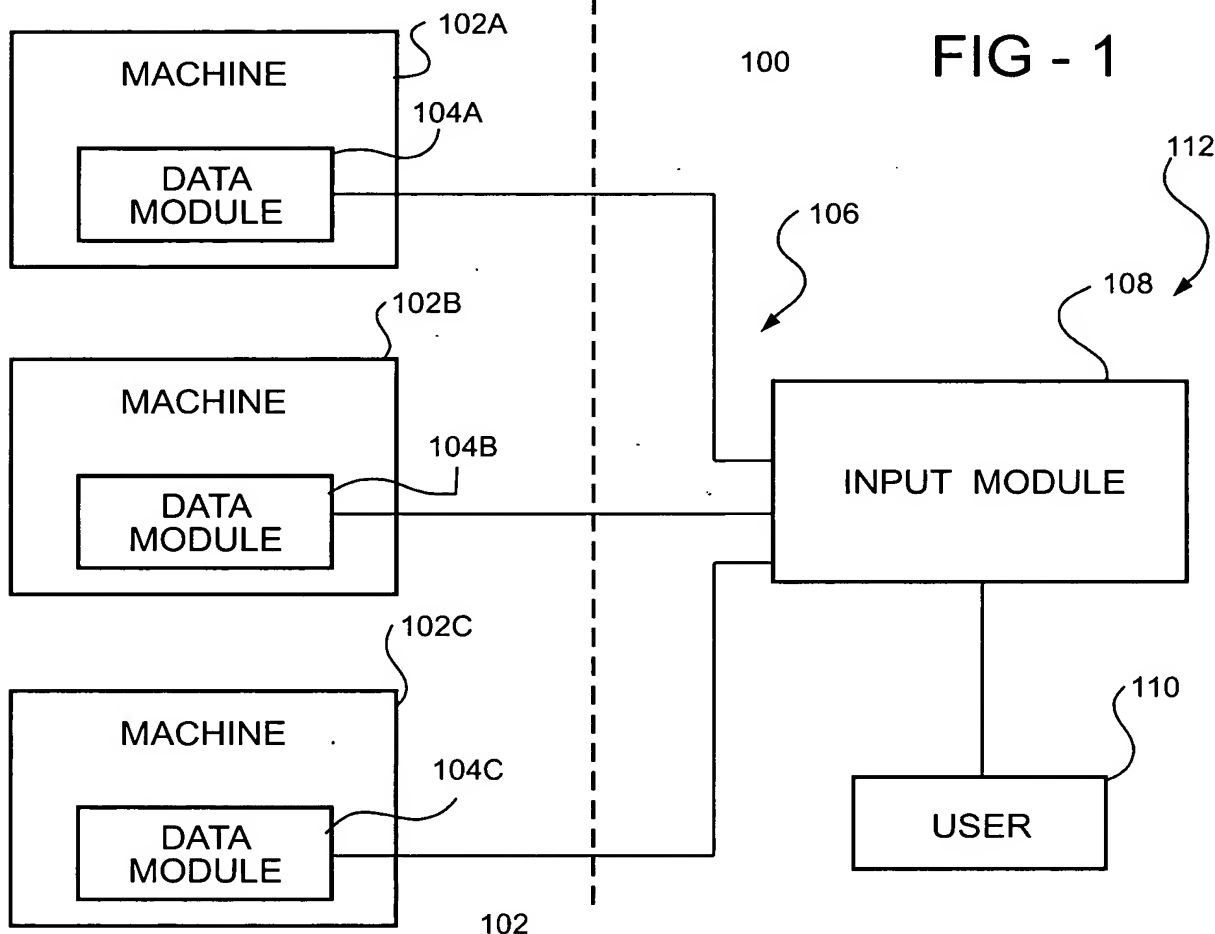


FIG - 2

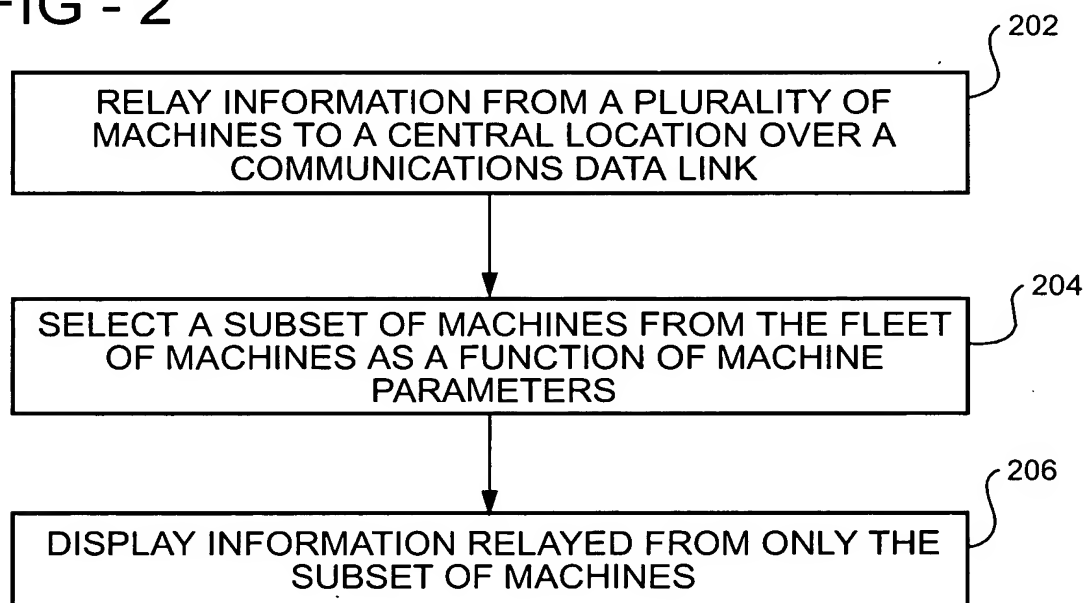


FIG - 3

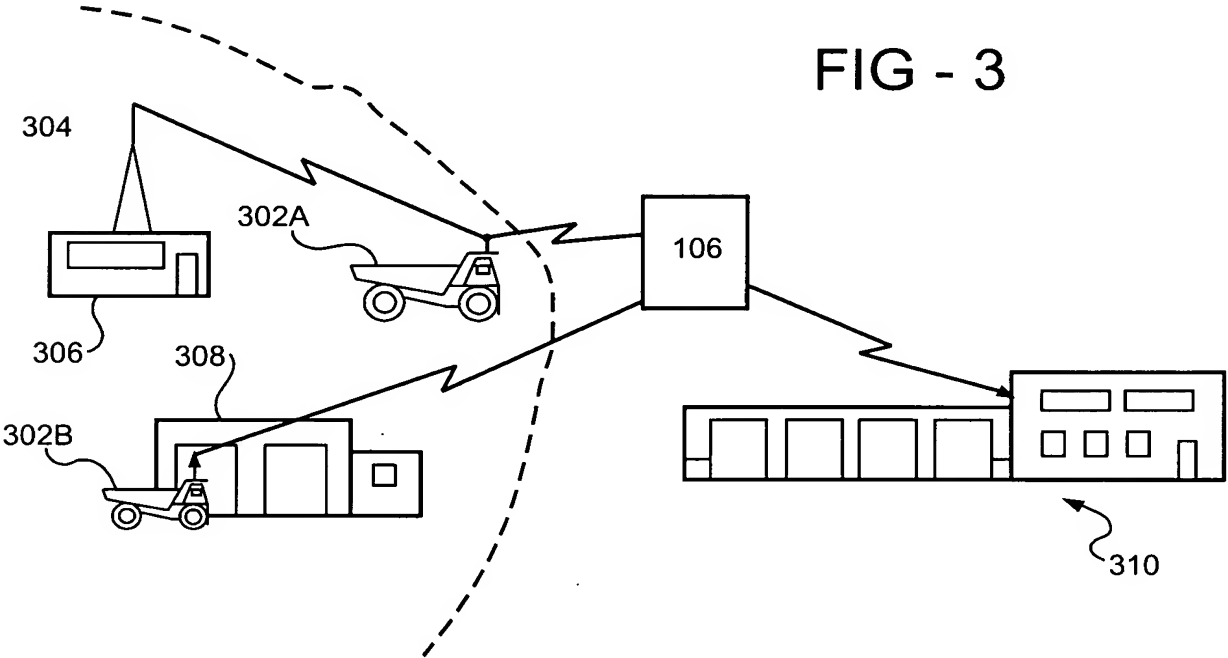


FIG - 5

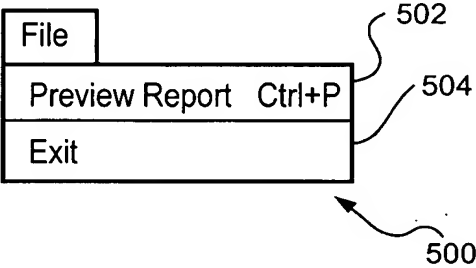


FIG - 6

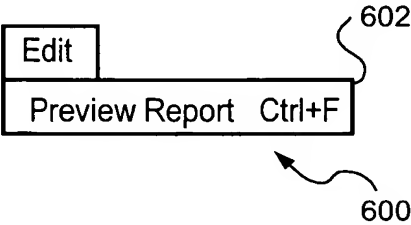
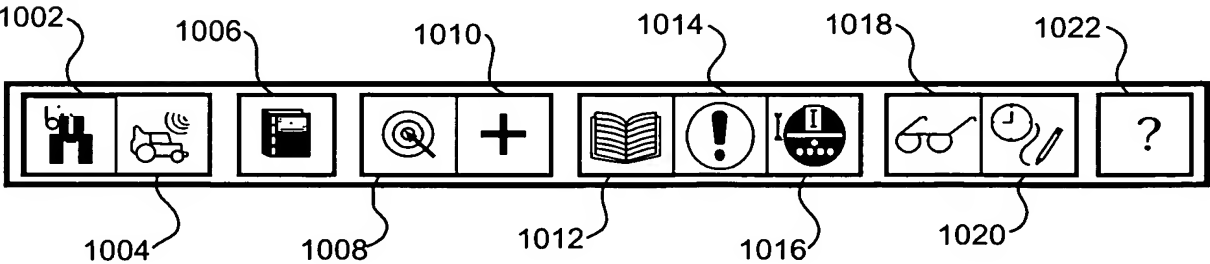


FIG - 10



3/33

FIG - 4

The screenshot displays a software window titled "Search Equipment - Caterpillar Product Link System". The window features a menu bar with "File", "Edit", "View", "Tasks", and "Help". Below the menu bar is a toolbar containing icons for a printer, a magnifying glass, a plus sign, a document, an exclamation mark, a gear, and a question mark. The main content area is divided into several sections. On the left, there is a section labeled "Equipment" (422) with a "Make" dropdown menu (424) set to "ALL", and "Model" (426), "Serial" (428), and "Unit" dropdown menus. To the right of this is a section labeled "Distance" (432) with "State" (434), "City" (436), and "Distance" dropdown menus. Below the "Equipment" section is a "Rental Status" (412) section with a checked "Rented" checkbox (438) and an unchecked "Not Rented" checkbox (440). Below the "Distance" section is a "Registration Status" (414) section with a checked "Registered" checkbox (442) and an unchecked "Deregistered" checkbox (444). A "Find" button (420) is located between the "Rental Status" and "Registration Status" sections. At the bottom of the window is a status bar that reads "Ready". The window is labeled with reference numerals 402, 404, 406, 408, and 400.

4/33

FIG - 7

	View	
702	✓ Toolbar	
704	✓ Status Bar	
706	View Registry	Ctrl+R
708	View Grief	Ctrl+G
710	View Service Meter Adjustments	Ctrl+J
712	View System Tables	Ctrl+Y
714	View Product Watch	Ctrl+W

FIG - 8

	Tasks	
802	✓ Search Equipment	Ctrl+Q
804	Send Commands	Ctrl+N
806	Reports	Ctrl+O
808	Working with Targets	Ctrl+T
810	Working with Event Reactions	Ctrl+E
812	Working with Diagnostic Reactions	Ctrl+D
814	Working with Level Reactions	Ctrl+L
816	Working with Alarm Reactions	Ctrl+A
818	Working with Product Watch Descriptions	Ctrl+H

800

FIG - 9

Help	
Help Topics	
View Manual	Ctrl+M
About CPLS	Ctrl+A

900

5/33

FIG - 11

Search Results									
Make	Model	Serial	Unit	Date / Time	SMU	Fuel	Location		
AA	D9R	8BL01064	D43000009	04/26/2000 12:26:01 PM	9063	101740	7.1 miles W of Huey		
AA	CHAL35	8DN00525	H39000018	04/26/2000 12:21:36 PM	3962		19.7 miles W of Del		
AA	D5C	6CS00467	B19000011	04/26/2000 12:18:20 PM	982		3.9 miles S of Newa		
AA	CHAL65C	2ZJO2409	H39000025	04/26/2000 12:07:14 PM	2812		2.5 miles N of Santa		
AA	D6X	AAX00006	EAE100000	04/26/2000 12:06:43 PM	374		19.4 miles W of Hob		
AA	D5M	6GN01196	B19000024	04/26/2000 12:04:27 PM	506		8.1 miles NW of Alle		
AA	416C	4ZN17140	E25000001	04/26/2000 11:58:33 AM	196		3.4 miles NW of Del		
AA	973	66G00646	N02000000	04/26/2000 11:53:47 AM	3111		7.8 miles W of Missi		
AA	D6MXB	ALH00002	EAE100004	04/26/2000 11:51:55 AM	107		30.3 miles E of Farm		
AA	CHAL45	1DR01733	H39000021	04/26/2000 11:50:47 AM	1169		22.3 miles SW of Ma		
AA	CHAL45	1DR01740	H39000031	04/26/2000 11:45:56 AM	1956		2.3 miles S of Salina		
AA	CHAL65C	2ZJO2434	H39000021	04/26/2000 11:44:36 AM	1848		12.6 miles SW of Le		
AA	776D	2YW00094	E35000006	04/26/2000 11:37:48 AM	10863	232819	10.7 miles NW of Fa		
AA	CHAL85C	9TK01973	H39000034	04/26/2000 11:23:29 AM	3094		1.5 miles NW of Sel		
AA	315B	3AW01389	H18000002	04/26/2000 11:18:17 AM	954		4.2 miles E of Vanc		
AA	CHAL65C	2ZJO2519	H39000047	04/26/2000 11:16:47 AM			22.5 miles SW of M		
AA	970F	7SK01017	N02000001	04/26/2000 11:07:06 AM	2150		9.6 miles S of Auror		
AA	CHAL75D	5AR00544	H39000043	04/26/2000 11:04:56 AM			5.0 miles NW of Hol		
AA	325B L	6DN00820	D10000002	04/26/2000 11:01:20 AM	805		1.3 miles E of Salen		

View Message History

View Event History

Status

Map

Close

6/33

FIG - 12

1202

1204

1224

1206

1246

1200

1218

1220

1222

1210

1214

1242

1244

1208

1212

1240

1238

1226

1228

1230

1232

1234

1236

1238

1240

1242

1244

1246

1200

Message History

Make AA 1208

Model 1210

Unit 1242

Serial 1238

PL2010FFBDTST14 1212

EAE100037 1244

Viewing 1 1222

To 91 1220

<<Back 1222

More>> 1220

Date / Time	SMU	Fuel	Location
04/13/2000 08:35:48 AM			2.7 miles N of Peoria, IL
04/13/2000 08:34:57 AM	431		
04/13/2000 08:03:11 AM			2.7 miles N of Peoria, IL
04/13/2000 08:03:11 AM	431		
04/12/2000 01:54:01 PM			2.6 miles N of Peoria, IL
04/12/2000 07:52:43 AM			2.7 miles N of Peoria, IL
04/12/2000 01:52:43 AM			2.7 miles N of Peoria, IL
04/11/2000 07:53:44 PM		260310	
04/11/2000 07:53:24 PM			2.7 miles N of Peoria, IL
04/11/2000 02:01:15 PM			2.7 miles N of Peoria, IL
04/11/2000 08:12:35 AM			2.7 miles N of Peoria, IL
04/11/2000 01:55:31 AM			2.7 miles N of Peoria, IL
04/10/2000 07:53:11 PM	431		
04/10/2000 07:52:50 PM			2.7 miles N of Peoria, IL

☒ Status ☒ Location ☒ SMU ☒ Fuel

"Fuel" is a calculated value to be used as a service indicator only.
This value is NOT to be used in economy of performance measurements.

Close

7/33

FIG - 13

1302

1304

1318

1316

1322

1344

1306

1348

1300

1326

1328

1330

1332

1346

1324

Event History

Make AA 1308

Model 1310

Unit 1340

Serial 1334

PL201OFFBDTST14 1336

EAE100037 1338

Testmod 1314

Viewing 1 20

<<Back

More>>

Level	Date / Time	Description	Module	Fault Codes	Occurrences
1	04/20/2000 03:13:56 PM	PL-201 Product Watch Exclusive Alarm	122	Alarm	0
1	04/20/2000 03:13:56 PM	PL-201 Product Watch Time Alarm	122	Alarm	0
2	04/18/2000 10:13:58 AM	Digital Input 1	122	EID:00630	0
1	04/18/2000 10:12:06 AM	Fuel Filter Restriction Warning	033	EID:00095	255
2	04/18/2000 10:12:06 AM	Engine Oil Pressure short to ground	033	CID:00100,FMI:004	2
2	04/18/2000 10:12:06 AM	Unfiltered Fuel Pressure open/short to +batt	033	CID:00289,FMI:003	2
2	04/18/2000 10:12:06 AM	Turbo Outlet Pressure open/short to +batt	033	CID:00273,FMI:003	2
2	04/18/2000 10:12:06 AM	Secondary Engine Speed open/short to +batt	033	CID:00342,FMI:003	2
2	04/18/2000 10:12:06 AM	Throttle Position signal abnormal	033	CID:00091,FMI:008	2
1	04/18/2000 10:11:56 AM	High Crankcase Pressure Warning	033	EID:00101	78
2	04/18/2000 10:11:56 AM	Crankcase Pressure open/short to +batt	033	CID:00101,FMI:003	2
2	04/18/2000 10:11:56 AM	Unfiltered Engine Oil Pressure short to ground	033	CID:00542,FMI:004	2
2	04/18/2000 10:11:56 AM	Right Exhaust Temperature short to ground	033	CID:00828,FMI:004	2
2	04/18/2000 10:11:56 AM	Left Exhaust Temperature short to ground	033	CID:00827,FMI:004	2

☒ Events ☒ Diagnostics ☒ Alarms

Request Update

Close

1406

1404

FIG - 15

Status History

Make: AA Model: Testmod Serial: PL2010FFBDTST14 Unit: EAE100037

Viewing: 1 To: 42 <<Back More>>

Date / Time	Power Loss	Satellite Blocked	Active	Alarm	Event Pending	Power Mode	Digital #1 Active
04/20/2000 03:13:56 PM			Yes	Yes			
04/18/2000 10:13:58 AM	No	No	No	No	Yes	1	Yes
04/18/2000 10:10:41 AM			No	No			
04/18/2000 10:07:20 AM			No	No			
04/14/2000 09:21:23 AM	No	No	No	No	No	1	No
04/14/2000 09:16:12 AM			No	No			
04/13/2000 09:55:59 AM	No	No	No	No	No	1	No
04/13/2000 09:14:30 AM	No	No	No	No	No	1	No
04/13/2000 08:38:09 AM	Yes	No	No	No	No	1	Yes
04/13/2000 08:34:57 AM	Yes	No	No	No	No	1	No
04/13/2000 08:03:11 AM			No	No			
04/11/2000 07:53:44 PM	No	No	Yes	No			
04/10/2000 07:53:11 PM	No	No	Yes	No	No	1	Yes

Close

10/33

FIG - 16

Product Watch Details For 1A12105 - EAE100015 - 143H - AA

Inclusive	Exclusive	Time
<p>Active : No Alarm : No Latitude : N 40 44.48333 Longitude : W 089 29.35000 Radius : 1 Miles Start Time : Start Immediately End Time : Never End Description : PPG Shop Vicinity - Test case</p>	<p>Active : Yes Alarm : No Position(1) -Latitude : N 40 47.05000 -Longitude : W 089 36.55000 -Radius : Start Immediately -Description : 1 Miles : Hale Road Exclusion</p>	<p>Active : Yes Alarm : No Week Days : Mon, Tues, Wed, Thr, Fri, Start Time : 05:00 AM End Time : 10:00 AM Description : MG Time Based Running Te</p>

Close

1602 1604 1606 1610 1600

FIG - 17

11/33

1704

1716G

1716H

1716I

1716J

1716K

1716L

1716A

1716B

1716C

1716D

1716E

1716F

1708

1710

1712

1714

1702

1706

406

1726

400

1724

1722

1720

408

Send Commands - Caterpillar Product Link System

File Edit View Tasks Help

Equipment

Make

Model

Serial

Unit

ALL

EDWARDS3

EAE100036

Command Type

Query for Location

Query for SMU

Query for Fuel

Query for Status

Query for Event

Query for Product Watch

Billing Deactivation

Billing Reactivation

Registration Request

Forced Deregistration

Deregistration

Clear Events

Queue Commands

Commands Queued:

Make	Model	Serial	Unit	Command Type
AA	143H	1A12105	EAE100015	Query for Location
AA	CHAL45	1DR01704	H39000004	Query for SMU
AA	CHAL45	1DR01734	H39000006	Query for SMU
AA	776D	2YW000093	E350000005	Query for Event
AA	Testmod	EDWARDS3	EAE100036	Query for product Watch
AA	Testmod	EDWARDS3	EAE100036	Query for Event
AA	Testmod	EDWARDS3	EAE100036	Query for Fuel
AA	Testmod	EDWARDS3	EAE100036	Query for SMU

1700

Ready

Send

Clear

Clear All

Commands Queued 8

12/33

FIG - 18

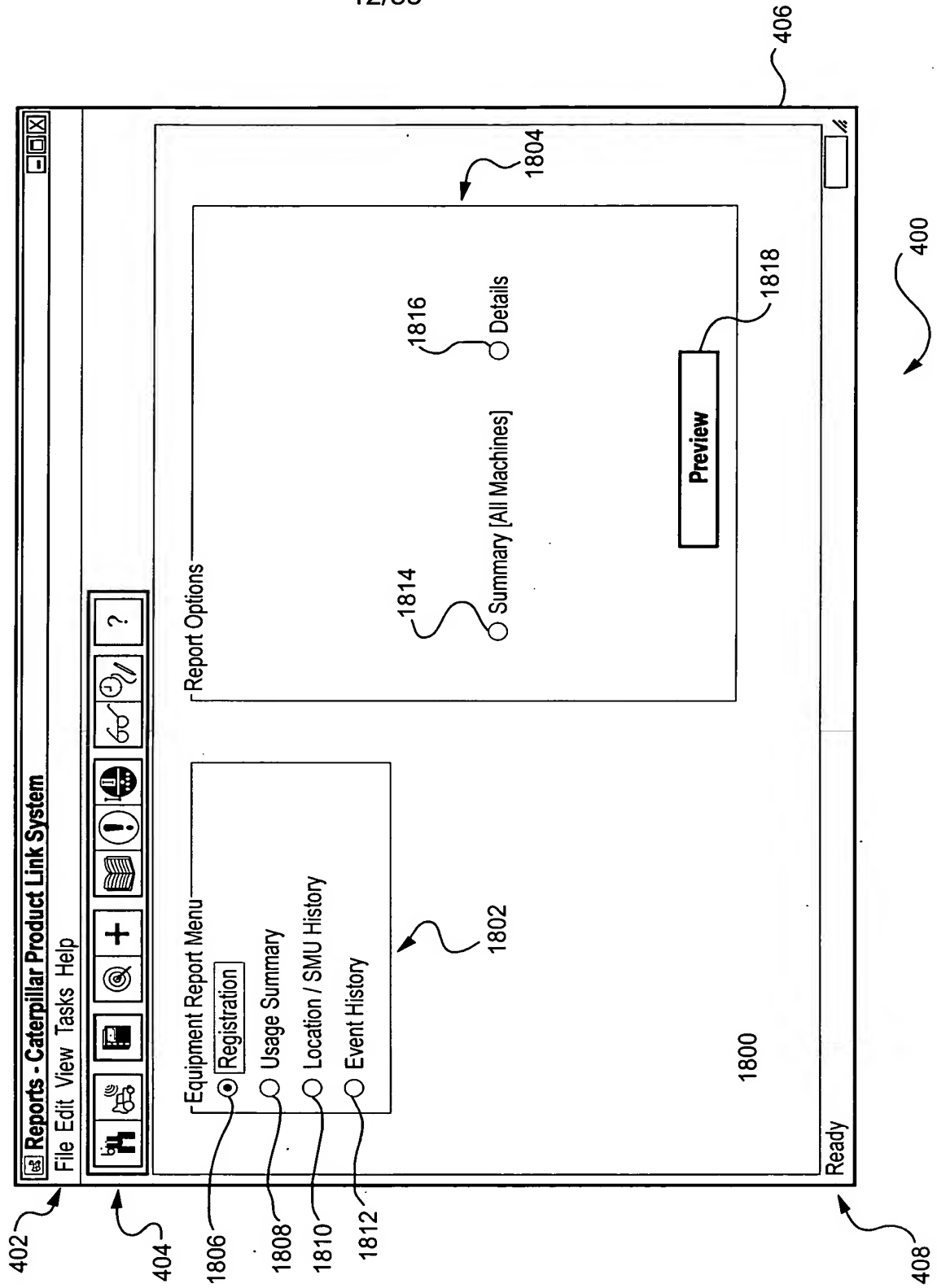
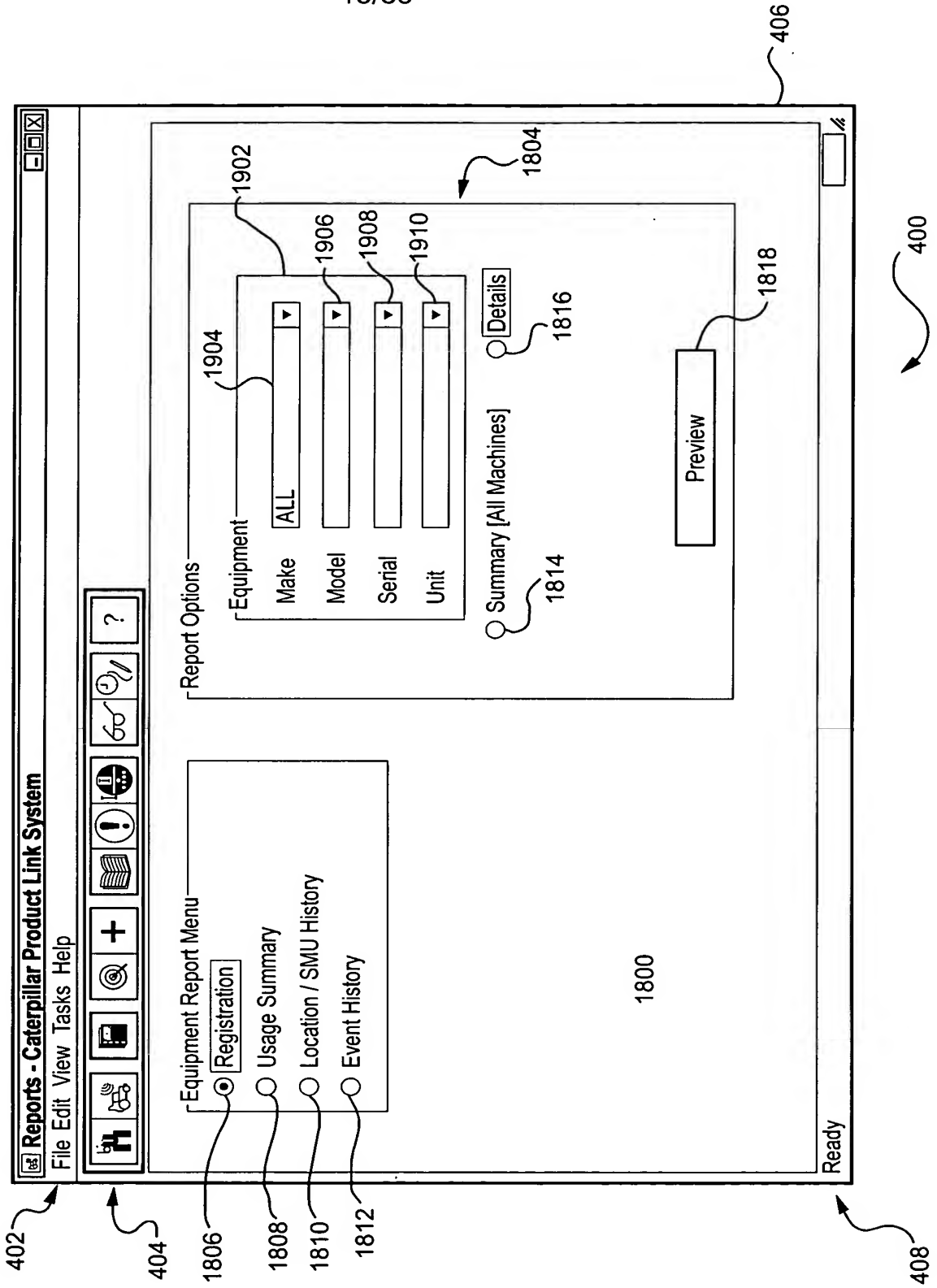
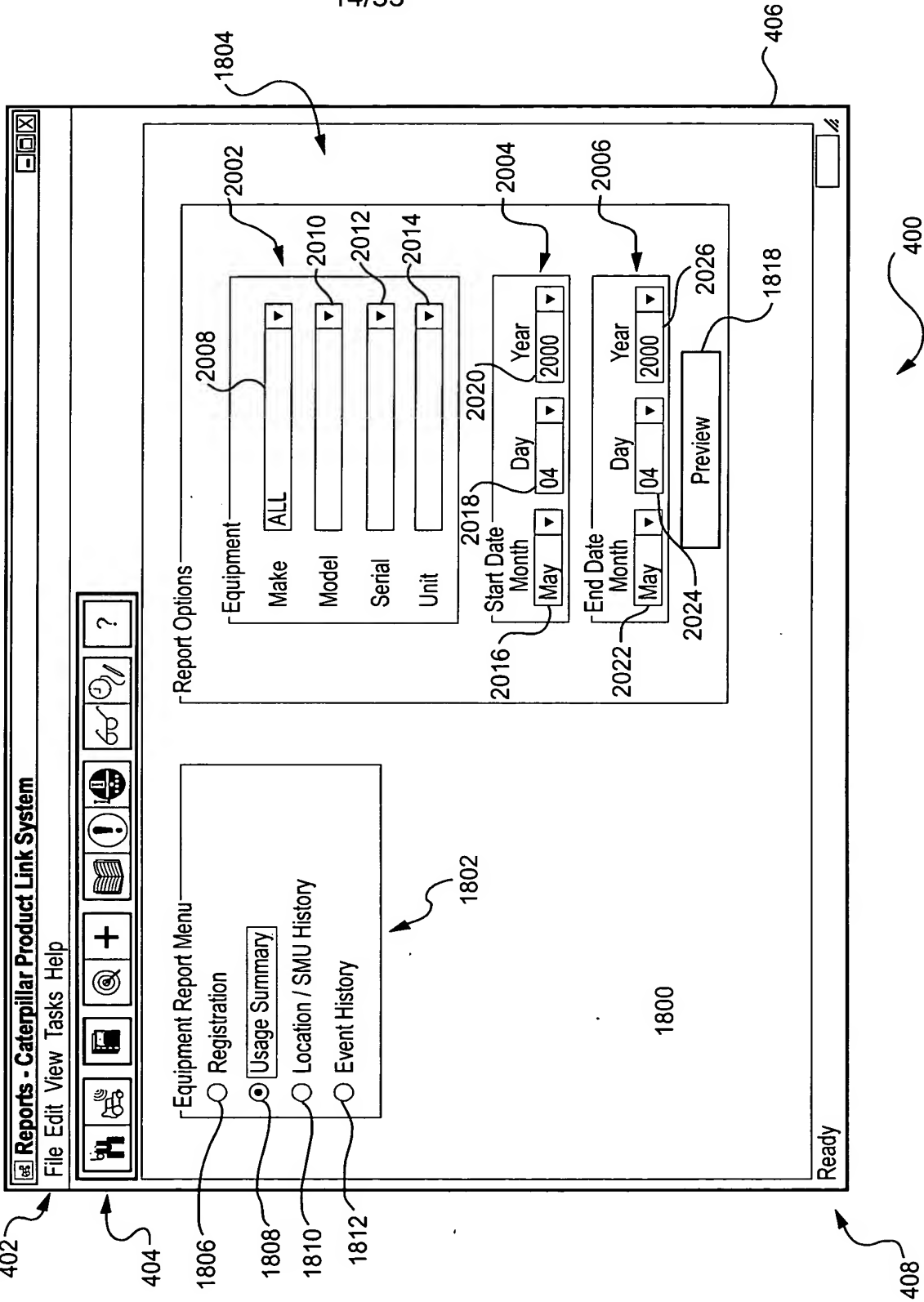


FIG - 19



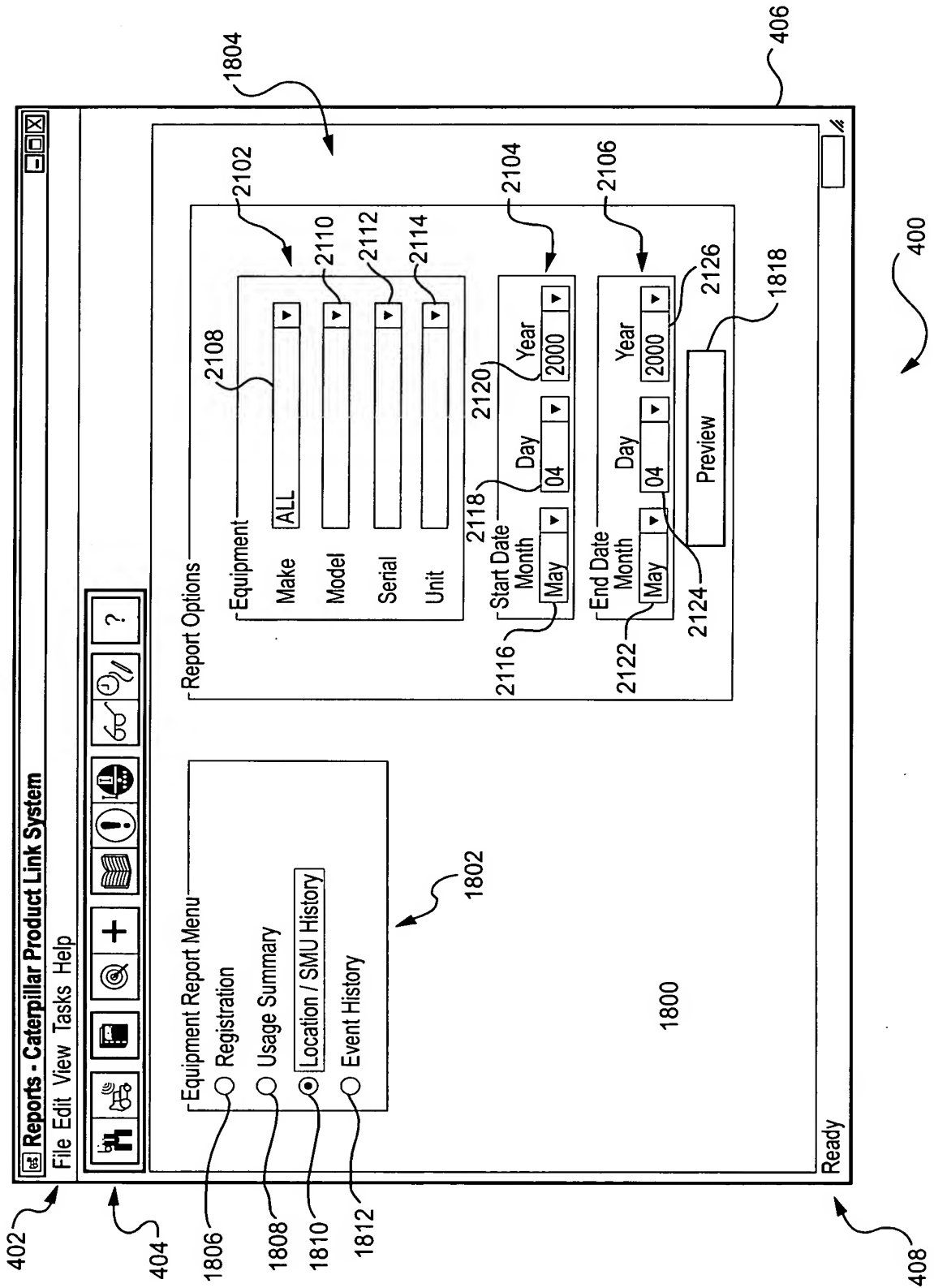
14/33

FIG - 20



15/33

FIG - 21



16/33

FIG - 22

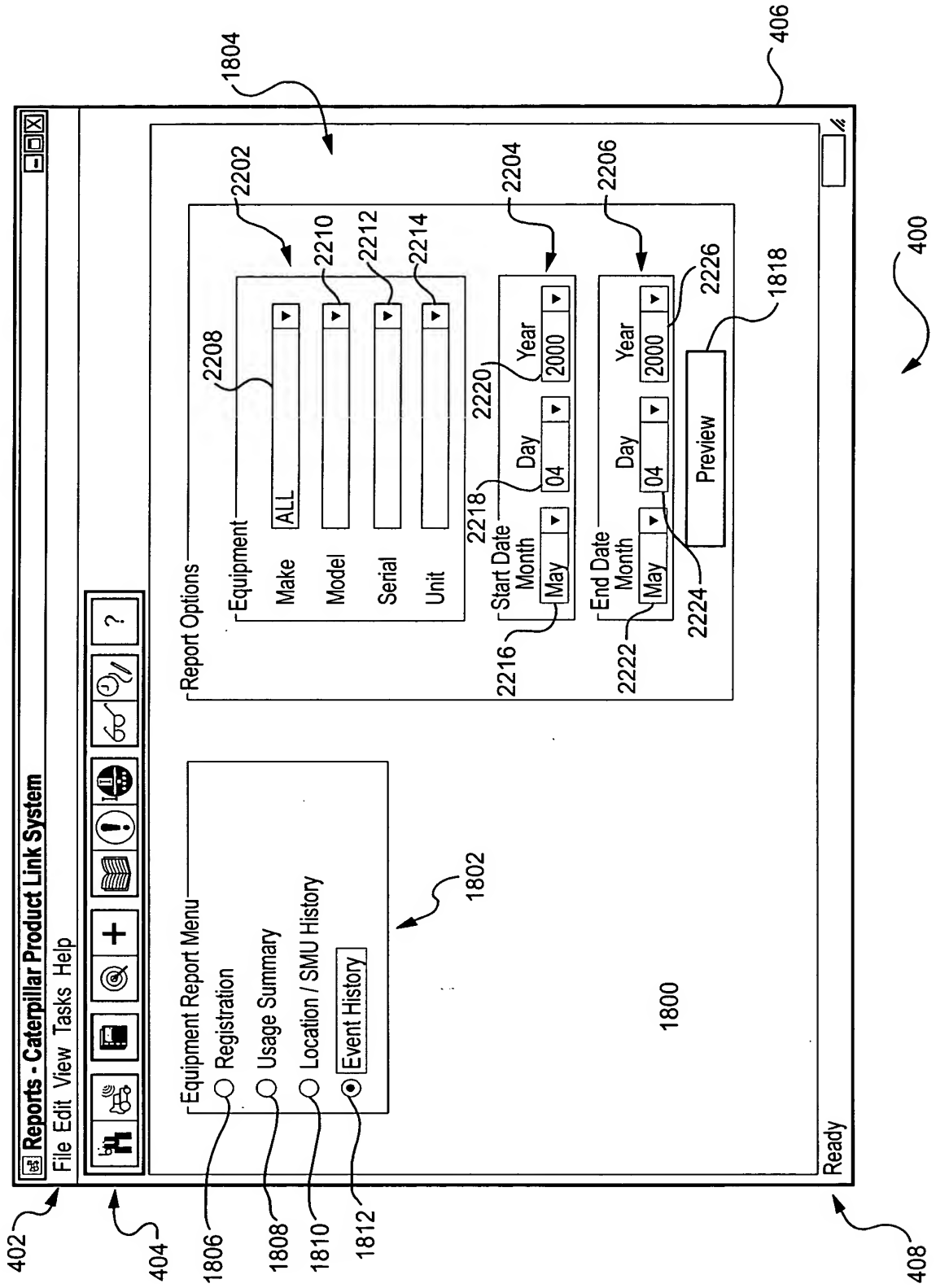
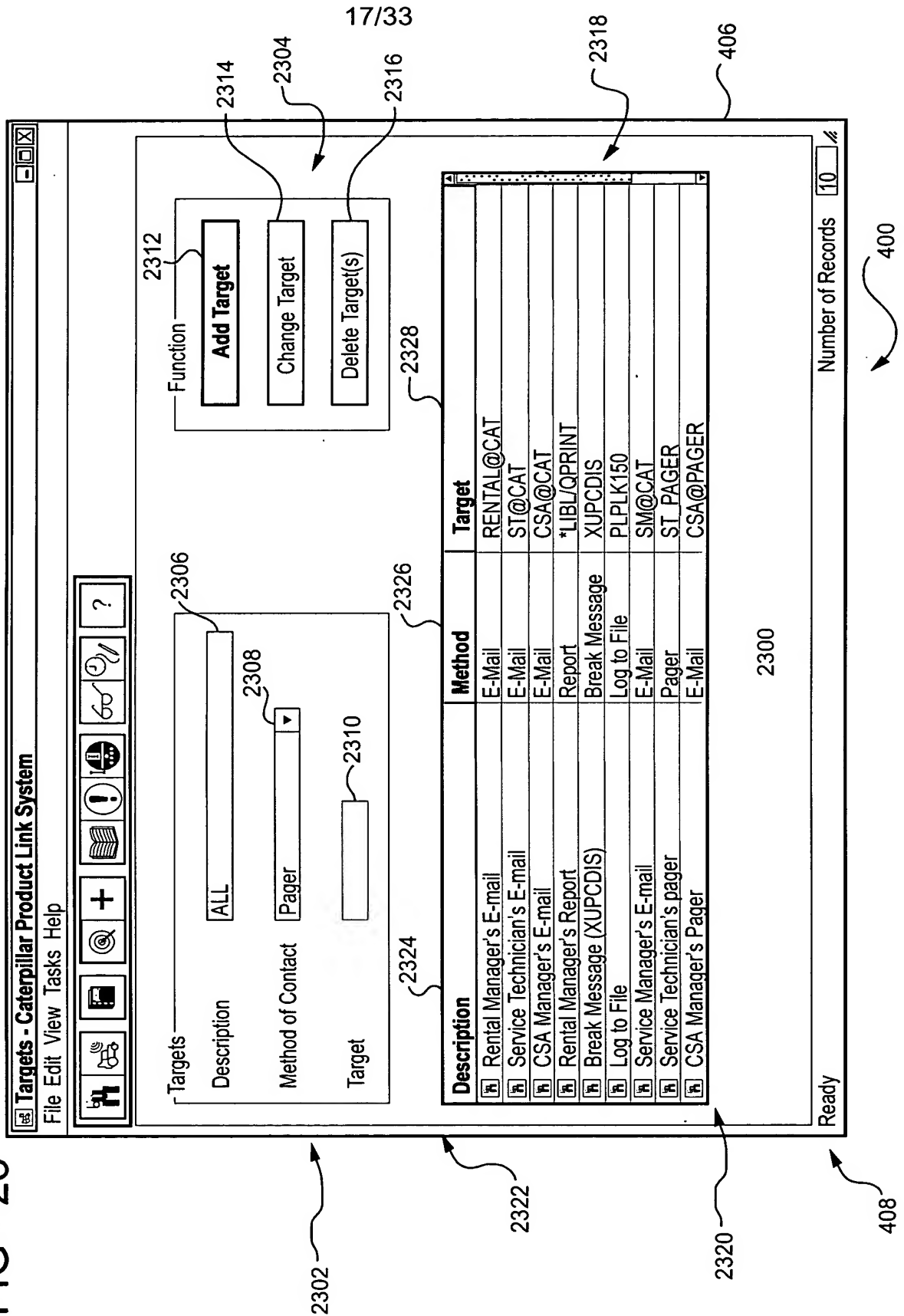


FIG - 23



18/33

FIG - 24

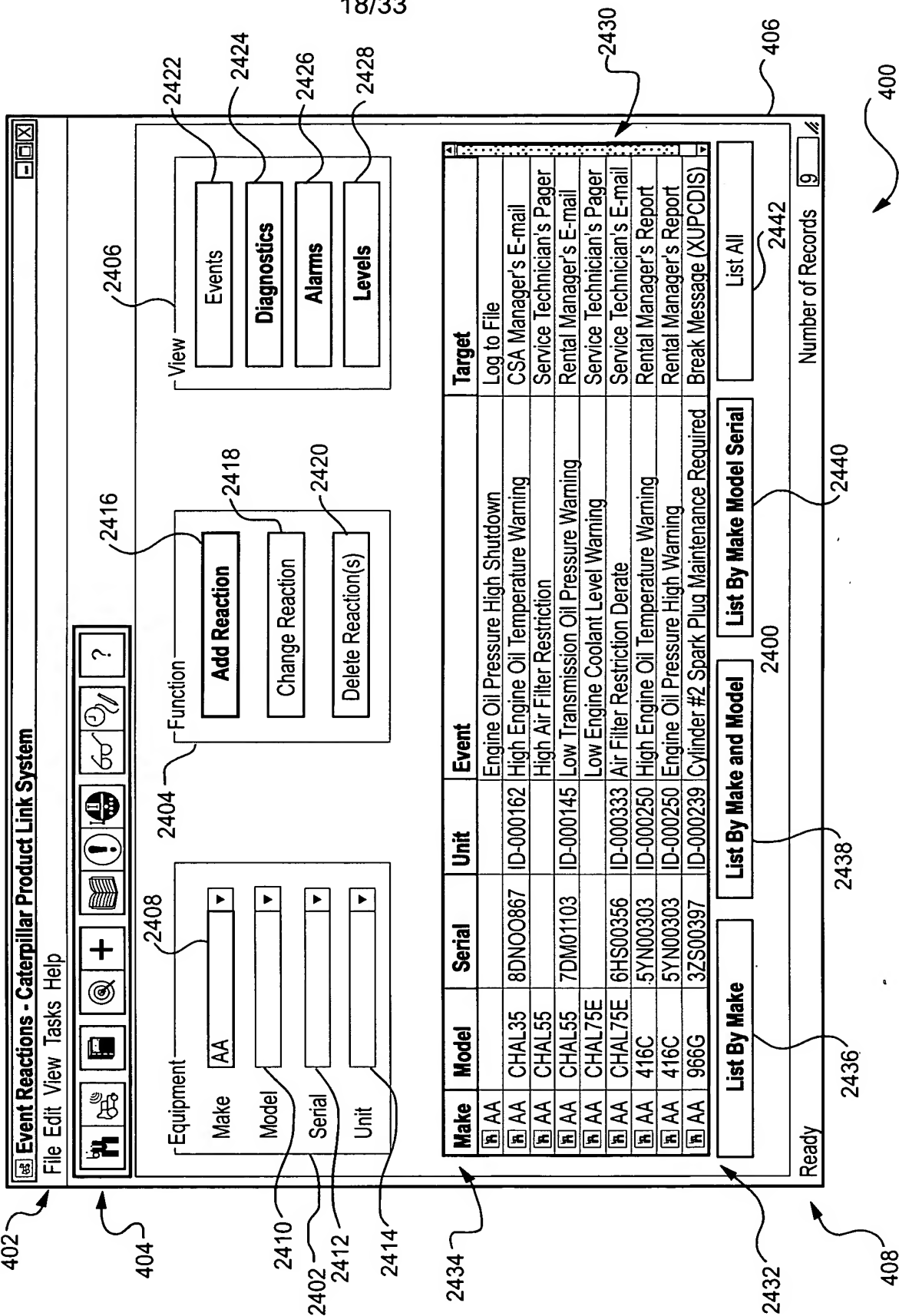


FIG - 25

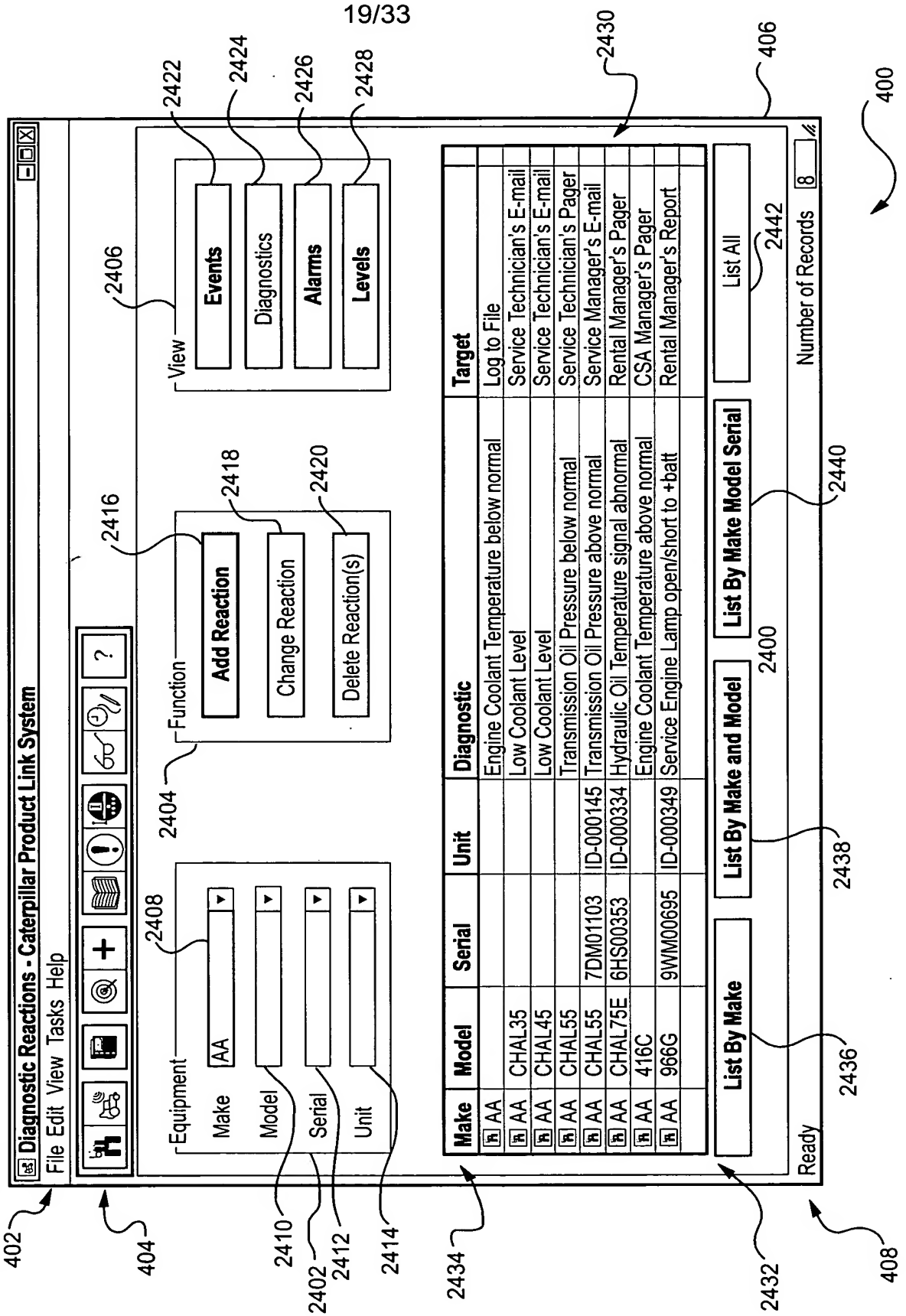
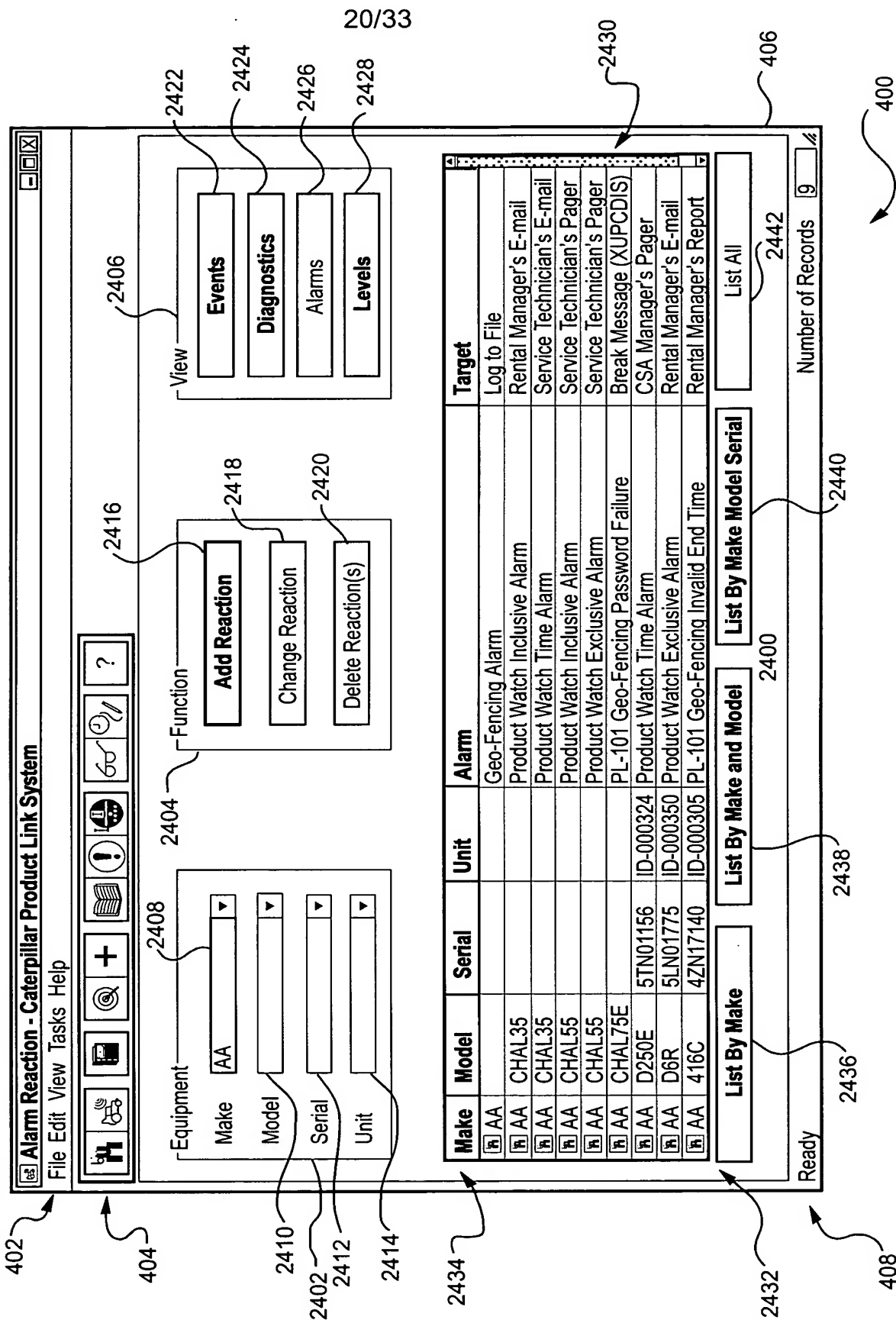
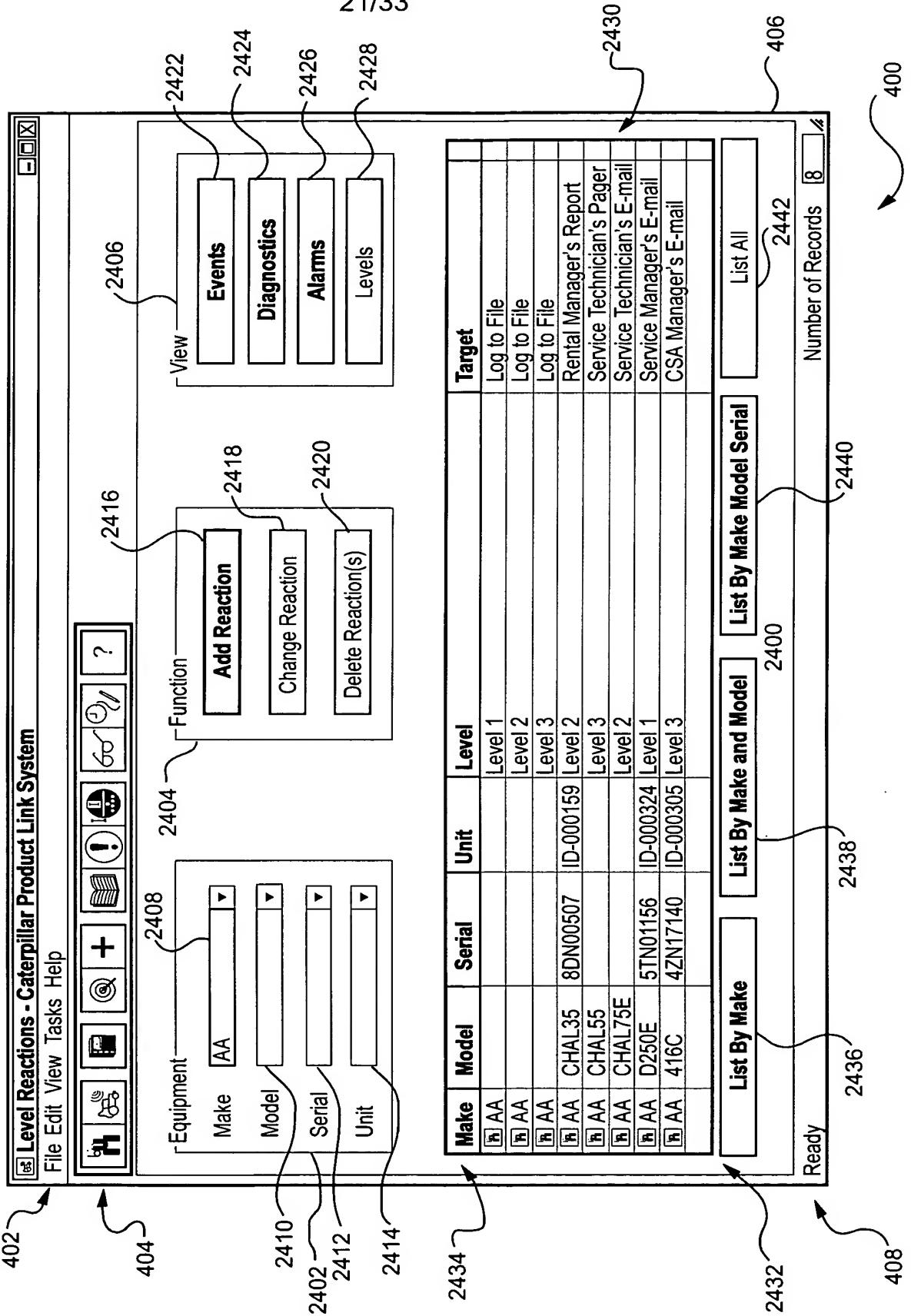


FIG - 26



21/33

FIG - 27



22/33

FIG - 28

View Registry - Caterpillar Product Link System
File Edit View Tasks Help

Find [?] [?] [?] [?]

Equipment
Make: [ALL] Model: [] Serial: [] Unit: []

Viewing
1 To 62 [More>>] [Clear All]

Configuration [2836]

Make	Model	Serial	Unit	Date / Time	Status	Primary	Report Time
AA	CHAL55	AEN00389	ID-000144	11/18/1999 01:34:57 PM	Registered	PL-101	01:34 PM
AA	IT28G	8CR01062	ID-000306	10/26/1999 04:19:25 AM	Registered	PL-101	04:19 AM
AA	416C	4ZN17140	ID-000305	10/26/1999 04:55:03 PM	Registered	PL-101	04:55 PM
AA	246	5SZ00554	ID-000308	10/27/1999 11:59:15 AM	Registered	PL-101	11:59 AM
AA	416B	8ZK09414	ID-000311	01/04/2000 04:08:40 PM	Deregistered	PL-101	01:32 PM
AA	TH83	3RN01983	ID-000309	10/28/1999 01:57:26 PM	Registered	PL-101	01:57 PM
AA	928G	6XR01108	ID-000312	10/28/1999 03:05:07 AM	Registered	PL-101	03:05 AM
AA	CHAL55	7DM01496	ID-000141	01/03/2000 05:57:24 PM	Registered	PL-101	07:05 PM
AA	CHAL55	7DM01103	ID-000145	09/08/1999 05:44:51 PM	Registered	PL-101	05:44 PM

Ready Number of Records: 62

FIG - 29

23/33

2832

406

400

408

2802

2810

2812

2814

2808

2804

2816

2818

2820

2822

2824

2826

2828

2830

2834

2836

2800

2806

18

1

<<Back

More>>

Configuration

Clear All

Viewing

To

18

General

Transmission

Digital

PL101

Find

Equipment

Make

Model

Serial

Unit

ALL

+

?

File Edit View Tasks Help

View Registry - Caterpillar Product Link System

Make	Model	Serial	Unit	Level 1	Level 2	Level 3	Diagnostic	Event Interval	Mess
AA	CHAL75E	6HS00365	ID-000329	Never	Next	Immediate	Immediate	20	168
AA	CHAL85E	6JS00400	ID-000330	Never	Next	Immediate	Immediate	20	168
AA	CHAL75E	6HS00363	ID-000328	Never	Next	Immediate	Immediate	20	168
AA	CHAL75E	6HS00356	ID-000333	Never	Next	Immediate	Immediate	20	168
AA	CHAL75E	6HS00366	ID-000335	Never	Next	Immediate	Immediate	20	168
AA	CHAL95E	6KS00476	ID-000336	Never	Next	Immediate	Immediate	20	168
AA	CHAL75E	6HS00353	ID-000334	Never	Next	Immediate	Immediate	20	168
AA	627F	1DL00400	ID-000338	Immediate	Immediate	Immediate	Immediate	20	168
AA	CHAL95E	6KS00474	ID-000345	Never	Next	Immediate	Immediate	20	168

Ready

Number of Records 18

24/33

FIG - 30

402 View Registry - Caterpillar Product Link System

File Edit View Tasks Help

404

2802

2810

2812

2814

2808

2804

2816

2818

2820

2822

2824

2826

2830

2834

2836

2800

406

408

400

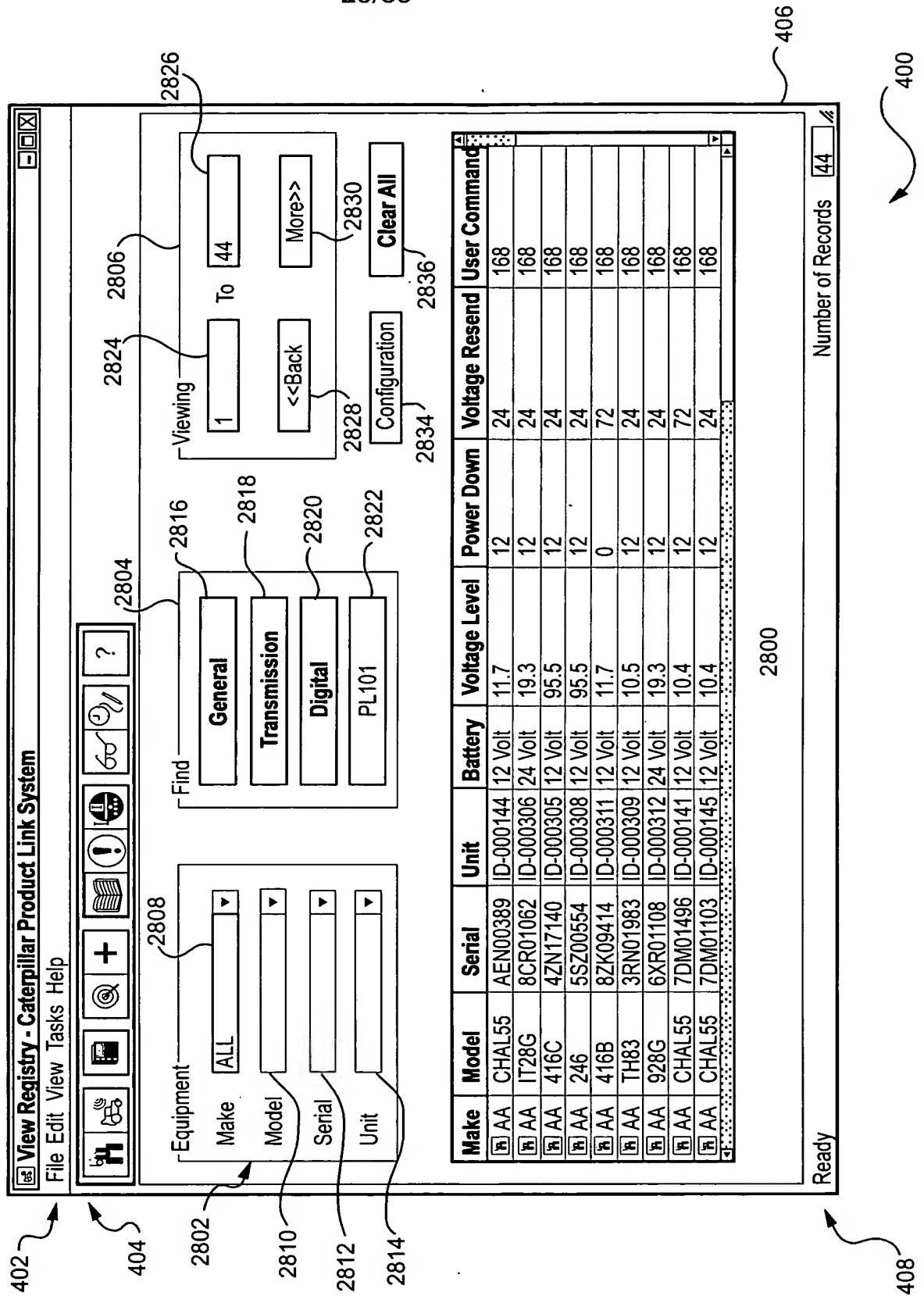
Make	Model	Serial	Unit	Type 1	Delay 1	Description 1	Type 2	De
AA	CHAL75E	6HS00365	ID-000329	Not Configured	0		Not Configured	0
AA	CHAL85E	6JS00400	ID-000330	Not Configured	0		Not Configured	0
AA	CHAL75E	6HS00363	ID-000328	Not Configured	0		Not Configured	0
AA	CHAL75E	6HS00356	ID-000333	Open	10	Digital #1 Sensor	Closed	20
AA	CHAL75E	6HS00366	ID-000335	Not Configured	0		Not Configured	0
AA	CHAL95E	6KS00476	ID-000336	Not Configured	0		Not Configured	0
AA	CHAL75E	6HS00353	ID-000334	Not Configured	0		Not Configured	0
AA	627F	1DL00400	ID-000338	Not Configured	0		Not Configured	0
AA	CHAL95E	6KS00474	ID-000345	Not Configured	0		Not Configured	0

Ready

Number of Records 18

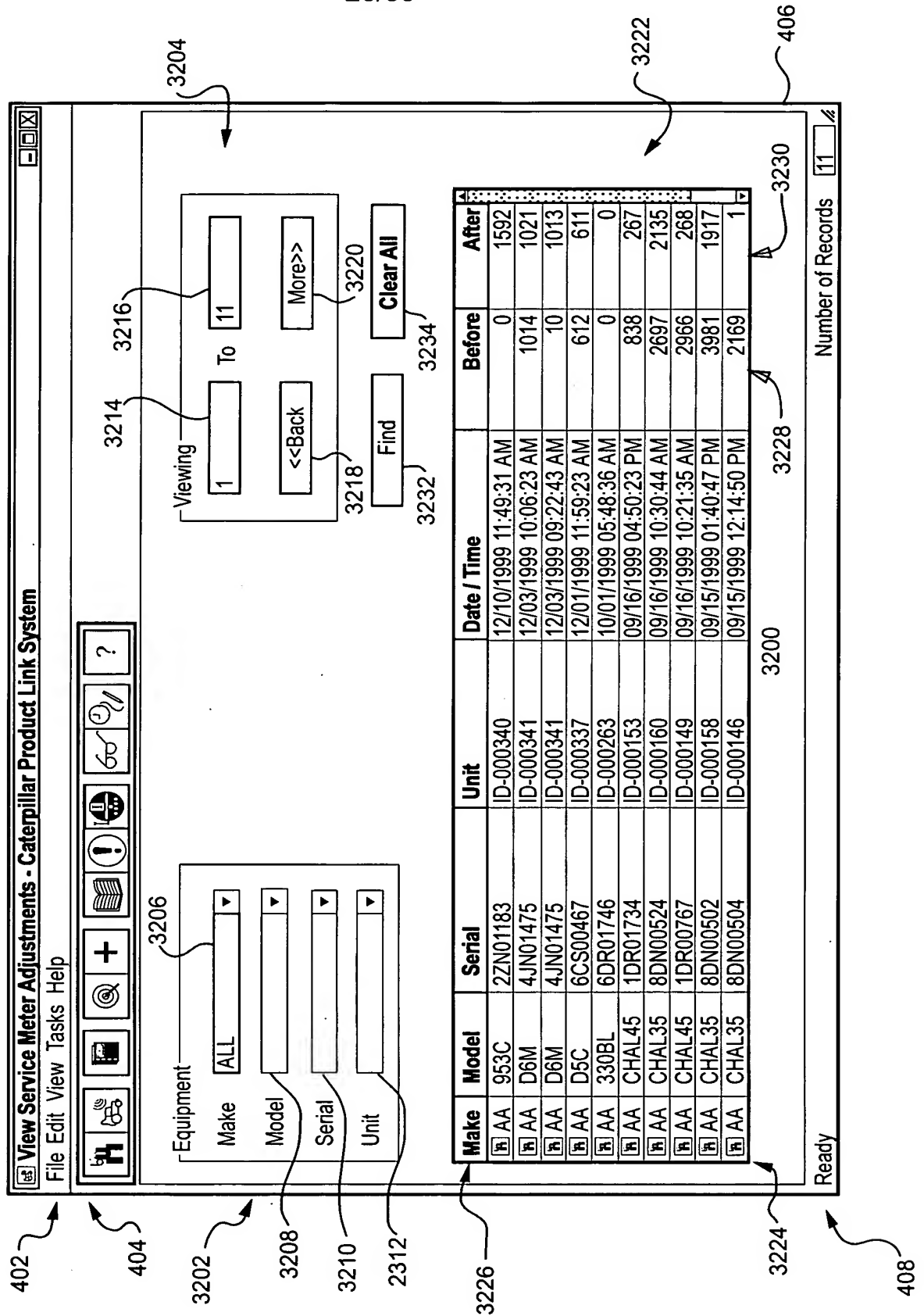
25/33

FIG - 31



26/33

FIG - 32



27/33

FIG - 33

402 View Grief - Caterpillar Product Link System
File Edit View Tasks Help

404

3302 Equipment
3310 Make ALL
3312 Model
3314 Serial
3316 Viewing 1 To 100
3320 <<Back
3322 More>>
3324 Find
3326 Clear All

3300

Make	Model	Serial	Unit	Date / Time	Description
AA	CHAL45	1DR00767	ID-000149	01/07/2000 02:34:44 PM	Target Reaction Failure - Report Target *LIBL/
AA	CHAL35	8DN00867	ID-000162	01/07/2000 02:13:01 PM	Target Reaction Failure - Report Target *LIBL/
AA	CB-534C	5HN00399	ID-000261	01/06/2000 08:29:42 PM	Target Reaction Failure - Report Target *LIBL/
AA	416C	5YN00303	ID-000250	01/06/2000 04:45:26 PM	Target Reaction Failure - Report Target *LIBL/
AA	CHAL45	1DR01704	ID-000151	01/06/2000 04:39:41 PM	Target Reaction Failure - Report Target *LIBL/
AA	D250E	5TN01156	ID-000324	01/06/2000 02:24:04 PM	Target Reaction Failure - Report Target *LIBL/
AA	CHAL35	8DN00867	ID-000162	01/06/2000 02:12:53 PM	Target Reaction Failure - Report Target *LIBL/
AA	D3C	4KS00574	ID-000238	01/06/2000 02:07:23 PM	Registration Failure
AA	928G	6XR01108	ID-000312	01/05/2000 11:25:21 PM	Target Reaction Failure - Report Target *LIBL/

3328

406 Number of Records 346

Ready

408

400

28/33

FIG - 34

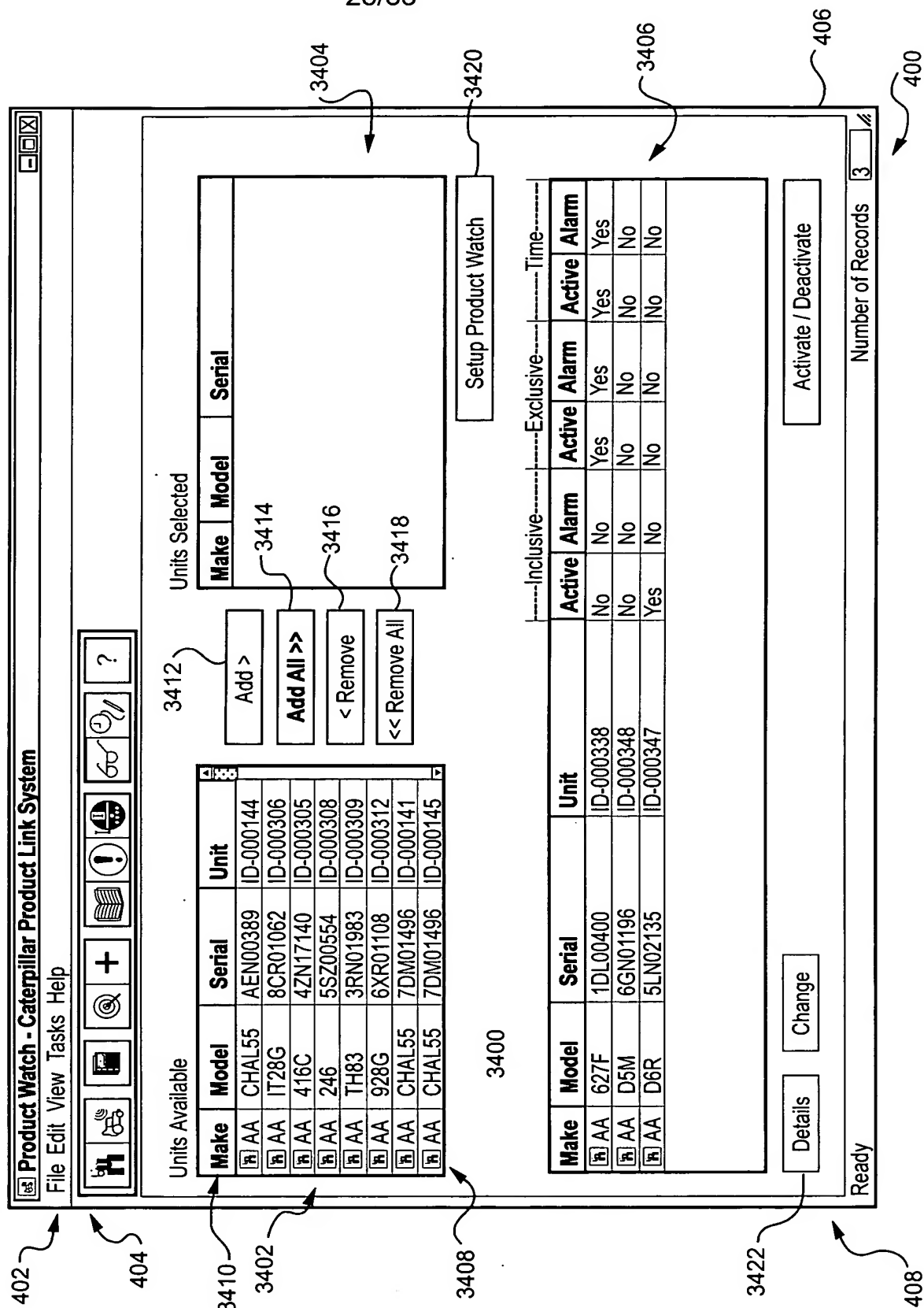


FIG - 35

FIG - 35 is a screenshot of a "Setup-Change Product Watch" dialog box (3504) with a title bar (3506) and a close button (3508). The dialog box contains three tabs: "Product Watch Inclusive" (3512), "Product Watch Exclusive" (3514), and "Product Watch Time" (3516). The "Product Watch Inclusive" tab is active, showing a "Select Position" section (3518) with input fields for Latitude (3520), Longitude (3521), and Radius (3522) in Miles. Below these fields is a "Load" button (3526). The "Product Watch Time" tab shows "Start Date" (3514) and "End Date" (3516) sections, each with Month, Day, Year, and Hour/Minute/Second dropdowns, and radio buttons for "Start Immediately" and "AM/PM". The "Product Watch Exclusive" tab is empty. At the bottom, there is a "Product Watch Description:" section (3524) containing a table (3526) with columns "Description", "Latitude", "Longitude", and "Radius". The table lists six entries: Springfield, IL Airport; Main Store; Brach Store; Customer Main Site; Customer Off Site; and Customer Digging Site. At the bottom right are "Queue" (3528) and "Cancel" (3530) buttons. The entire dialog box is labeled 3500.

Description	Latitude	Longitude	Radius
Springfield, IL Airport	N 39 50.98333	W 089 40.98333	5 mile
Main Store	N 39 27.93333	W 089 22.18333	10 mile
Brach Store	N 39 24.80000	W 089 17.25000	10 mile
Customer Main Site	N 39 27.83333	W 089 26.31667	7 mile
Customer Off Site	N 39 25.71667	W 089 23.60000	7 mile
Customer Digging Site	N 39 24.73333	W 089 21.11667	5 mile
Customer Home	N 39 25.33333	W 089 21.85000	2 mile

FIG - 36

Setup-Change Product Watch

Product Watch Inclusive | Product Watch Exclusive | Product Watch Time

Select Position

Latitude [▼] [00] [▲] [00] [▼] [00] [▲]

Longitude [▼] [000] [▲] [00] [▼] [00] [▲]

Radius [] Miles [>>]

Delete Load

Product Watch Description:

Description	Latitude	Longitude	Radius
Springfield, IL Airport	N 39 50.98333	W 089 40.98333	5 mile
Main Store	N 39 27.93333	W 089 22.18333	10 mile
Brach Store	N 39 24.80000	W 089 17.25000	10 mile
Customer Main Site	N 39 27.83333	W 089 26.31667	7 mile
Customer Off Site	N 39 25.71667	W 089 23.60000	7 mile
Customer Digging Site	N 39 24.73333	W 089 21.11667	5 mile
Customer Home	N 39 25.33333	W 089 21.85000	2 mile

Queue Cancel

FIG - 37

FIG - 37 is a screenshot of a software application window titled "Setup-Change Product Watch". The window is divided into several sections:

- Product Watch Inclusive:** A section with a "Days" label and checkboxes for Monday, Tuesday, Wednesday, Thursday, Friday, Saturday, and Sunday. A "Clear" button is located at the bottom right of this section.
- Product Watch Exclusive:** A section with a "Working Hours" label and two time input fields: "Start Time" and "End Time". Each field has a dropdown menu for AM/PM and a numeric input for the hour and minute. A "Clear" button is located at the bottom right of this section.
- Product Watch Time:** A section with a "Load" button.
- Product Watch Description:** A table with columns "Description", "Start Time", "End Time", and "Days". The table contains several rows of data, including "Working Hours for M...", "Main Store Hours", "Weekend Hours", "Working Hours for B...", "Customer Work Hour...", and "Branch Store Hours".
- Buttons:** "Queue" and "Cancel" buttons are located at the bottom right of the window.

The window is labeled with various reference numerals: 3504 for the title bar, 3506 for the tabs, 3508 for the main content area, 3702 for the "Days" section, 3704 for the "Working Hours" section, 3706 for the "Product Watch Time" section, 3708 for the "Load" button, 3700 for the "Product Watch Description" table, 3524 for the "Queue" button, 3526 for the "Cancel" button, and 3500 for the entire window.

Description	Start Time	End Time	Days
Working Hours for M...	07:00:00 AM	11:00:00 PM	Mon - Tue - Wed - Thr - Fri
Main Store Hours	08:00:00 AM	05:00:00 PM	Mon - Tue - Wed - Thr - Fri
Weekend Hours	01:00:00 PM	00:00:00 AM	Sat - Sun
Working Hours for B...	06:00:00 AM	06:00:00 PM	Mon - Tue - Wed - Thr - Fri - Sat
Customer Work Hour...	07:00:00 AM	06:00:00 PM	Mon - Tue - Wed - Thr - Fri
Branch Store Hours ...	08:00:00 AM	06:00:00 AM	Mon - Tue - Wed - Thr - Fri

FIG - 38

Product Watch Details For 1DL00400 - ID-000338 - 627F - AA

Inclusive	Exclusive	Time
<div>3802</div> <div>Active : No Alarm : No Latitude : N 39 43.43333 Longitude : W 089 39.55000 Radius : 2 Miles Start Time : Start Immediately End Time : Never End Description : Customer Off Site</div>	<div>3804</div> <div>Active : Yes Alarm : Yes Position(1) -Latitude : N 39 85.61667 -Longitude : W 089 68.50000 -Radius : 1 Miles -Description : Springfield, IL Airport Position(2) -Latitude : N 39 42.36667 -Longitude : W 089 36.68333 -Radius : 2 Miles -Description : Customer Home Position(3) -Latitude : N 39 46.91667 -Longitude : W 089 37.61667 -Radius : 10 Miles -Description : Main Store</div>	<div>3806</div> <div>Active : Yes Alarm : Yes Week Days : Mon, Tues, Wed, Thr, Fri, Start Time : 07:00 AM End Time : 06:00 AM Description : Customer Work Hours</div>

<< Backward

Forward >>

Close

FIG - 39

